

L Number	Hits	Search Text	DB	Time stamp
1	2	20020064357.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 08:07
2	2	20020006837.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 08:16
3	3	"04010463"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 08:16
4	4	US-4169599-\$.DID. OR US-5789616-\$.DID.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:11
5	0	("50861890").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:11
6	0	"50861890"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:11
7	0	"degree of compaction"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:11
11	546	562/598.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:11
12	1072	zinc adj acrylate	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:11
13	1204880	aspect	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:11
14	229	(zinc adj acrylate) and aspect	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:11
15	66952	aspect adj ratio	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 12:20
17	0	(zinc adj acrylate) same (aspect adj ratio)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:11
8	3	"02218639"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:11
9	4	US-4169599-\$.DID. OR US-5789616-\$.DID.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:11
10	4	"06079018"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:12
16	17	(zinc adj acrylate) and (aspect adj ratio)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:12

18	2	4614827.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:36
19	6	4614827.URPN.	USPAT	2004/06/04 09:22
20	138662	stearate	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:36
21	1	4614827.URPN. and stearate	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 09:36
22	910488	crystal	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 12:20
23	5081	(aspect adj ratio) same crystal	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 12:21
24	1683	(aspect adj ratio) near4 crystal	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 12:21
25	2	(zinc adj acrylate) and ((aspect adj ratio) near4 crystal)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/06/04 12:21

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition
1	BRS	L1	2	20020064357.pn.	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 08:07		
2	BRS	L2	2	20020006837.pn.	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 08:16		
3	BRS	L3	3	"04010463"	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 08:16		
4	BRS	L4	4	US-4169599-\$.DID. OR US-5789616-\$.DID.	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:11		
5	IS&R	L5	0	("50861890").PN.	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:11		
6	BRS	L6	0	"50861890"	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:11		
7	BRS	L7	0	"degree of compaction"	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:11		

	Err ors
1	0
2	0
3	0
4	0
5	0
6	0
7	0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition
	BRS	L11	546	562/598.ccls.	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:11		
	BRS	L12	1072	zinc adj acrylate	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:11		
0	BRS	L13	12048 80	aspect	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:11		
1	BRS	L14	229	(zinc adj acrylate) and aspect	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:11		
2	BRS	L15	66952	aspect adj ratio	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 12:20		
3	BRS	L17	0	(zinc adj acrylate) same (aspect adj ratio)	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:11		
4	BRS	L8	3	"02218639"	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:11		

	Err ors
8	0
9	0
10	0
11	0
12	0
13	0
14	0

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition
15	BRS	L9	4	US-4169599-\$.DID. OR US-5789616-\$.DID.	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:11		
16	BRS	L10	4	"06079018"	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:12		
17	BRS	L16	17	(zinc adj acrylate) and (aspect adj ratio)	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:12		
18	BRS	L18	2	4614827.pn.	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:36		
19	BRS	L19	6	4614827.URPN.	USPAT	2004/06/04 09:22		
20	BRS	L20	13866 2	stearate	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:36		
21	BRS	L21	1	119 and 120	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 09:36		
22	BRS	L22	91048 8	crystal	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 12:20		

	Err ors
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0



	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition
23	BRS	L23	5081	115 same 122	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 12:21		
24	BRS	L24	1683	115 near4 122	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 12:21		
25	BRS	L25	2	112 and 124	USPAT ; US-PG PUB; EPO; JPO; DERWE NT	2004/06/04 12:21		

	Err ors
23	0
24	0
25	0

NEWS 21 May 27 STN User Update to be held June 7 and June 8 at the SLA 2004 Conference

NEWS 22 May 27 New UPM (Update Code Maximum) field for more efficient patent SDIs in CPlus

NEWS 23 May 27 CPlus super roles and document types searchable in REGISTRY

NEWS 24 May 27 Explore APOLLIT with free connect time in June 2004

NEWS EXPRESS MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004

NEWS HOURS STN Operating Hours Plus Help Desk Availability

NEWS INTER General Internet Information

NEWS LOGIN Welcome Banner and News Items

NEWS PHONE Direct Dial and Telecommunication Network Access to STN

NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 08:10:12 ON 04 JUN 2004

=> ile reg

THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE

Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 08:10:21 ON 04 JUN 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 2 JUN 2004 HIGHEST RN 688737-01-1

DICTIONARY FILE UPDATES: 2 JUN 2004 HIGHEST RN 688737-01-1

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

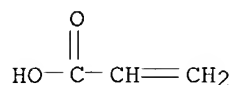
```
=> e zinc acrylate/cn
E1      1      ZINC ACEXAMATE/CN
E2      1      ZINC ACID PHOSPHATE/CN
E3      1 --> ZINC ACRYLATE/CN
E4      1      ZINC ACRYLATE HOMOPOLYMER/CN
E5      1      ZINC ACRYLATE POLYMER/CN
E6      1      ZINC ACRYLATE-CALCIUM ACRYLATE-LAURYL VINYL ETHER COPOLYMER/
CN
E7      1      ZINC ACRYLATE-CALCIUM ACRYLLATE-LAURYL VINYL ETHER POLYMER/C
N
E8      1      ZINC ACRYLATE-LAURYL VINYL ETHER COPOLYMER/CN
E9      1      ZINC ACRYLATE-LAURYL VINYL ETHER POLYMER/CN
E10     1      ZINC ACRYLATE-STYRENE COPOLYMER/CN
E11     1      ZINC ACRYLATE-VINYL CHLORIDE COPOLYMER/CN
E12     1      ZINC ADIPATE/CN
```

=> e3

```
L1      1 "ZINC ACRYLATE"/CN
```

=> d l1

```
L1      ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2004 ACS on STN
RN      14643-87-9  REGISTRY
CN      2-Propenoic acid, zinc salt (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN      Acrylic acid, zinc salt (8CI)
CN      Zinc acrylate (7CI)
OTHER NAMES:
CN      Actor ZA
CN      Blemmer S 122
CN      RR-ZDA
CN      Saret 633
CN      Sartomer 633
CN      SR 111
CN      SR 526
CN      SR 633
CN      SR 633 (acrylate)
CN      SR 705
CN      SR 706
CN      Zinc diacrylate
CN      Zinc(II) acrylate
CN      ZNDA 90S
DR      120220-24-8, 113329-02-5, 70507-67-4, 142605-01-4, 191744-27-1
MF      C3 H4 O2 . 1/2 Zn
CI      COM
LC      STN Files:  BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,
CHEMLIST, CIN, CSCHEM, GMELIN*, IFICDB, IFIPAT, IFIUDB, PIRA, PROMT,
TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources:  EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)
DT.CA   CAplus document type:  Conference; Journal; Patent
RL.P    Roles from patents:  BIOL (Biological study); PREP (Preparation); PROC
(Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses);
NORL (No role in record)
RLD.P   Roles for non-specific derivatives from patents:  BIOL (Biological
study); PREP (Preparation); PRP (Properties); USES (Uses)
RL.NP   Roles from non-patents:  PREP (Preparation); PROC (Process); PRP
(Properties); RACT (Reactant or reagent); USES (Uses)
RLD.NP  Roles for non-specific derivatives from non-patents:  PREP
(Preparation); PRP (Properties); USES (Uses)
CRN     (79-10-7)
```



● 1/2 Zn

486 REFERENCES IN FILE CA (1907 TO DATE)  
 27 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 486 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

7.04

7.25

FILE 'CAPLUS' ENTERED AT 08:11:19 ON 04 JUN 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 4 Jun 2004 VOL 140 ISS 24

FILE LAST UPDATED: 3 Jun 2004 (20040603/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> l1

L2 486 L1

=> particle

606064 PARTICLE

685838 PARTICLES

L3 1028108 PARTICLE

(PARTICLE OR PARTICLES)

=> l2(1)l3

L4 8 L2(L)L3

=> d l4 1-8 ti

L4 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

TI Multilayer golf ball having solid particle-dispersed intermediate rubber layer

L4 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Golf ball having solid particle-dispersed intermediate rubber layer

L4 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Production of zinc acrylate particle composition for use in rubber formulations

L4 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Preparation of surface-treated metal acrylate particles having improved dispersibility in rubbers

L4 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Production of zinc acrylate

L4 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Manufacture of zinc acrylate for improved kneadability of rubber compositions

L4 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Core compositions with good durability for two-piece golf balls

L4 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Zinc acrylate

=> d l4 1-8 ti fbib abs

L4 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Multilayer golf ball having solid particle-dispersed intermediate rubber layer  
 AN 2003:633250 CAPLUS  
 DN 139:165621  
 TI Multilayer golf ball having solid particle-dispersed intermediate rubber layer  
 IN Endo, Seiichiro; Ohama, Keiji  
 PA Japan  
 SO U.S. Pat. Appl. Publ., 12 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003153406	A1	20030814	US 2003-353930	20030130
				JP 2002-34979 A	20020213
	JP 2003230640	A2	20030819	JP 2002-34979	20020213
AB	Golf ball has a core, a mid layer, and a cover. The mid layer comprises a matrix of base material rubber or a synthetic resin, and 5-50% solid particles which are dispersed in this matrix. Hardness (Shore D), Hg, of the solid particles is greater than hardness, Hm, of the matrix, Hg of the solid particles is $\geq 40$ , and Hm of the matrix is $\geq 30$ . Difference between both hardness (Hg-Hm) values is $> 5$ . Particle size, D, of the solid particles is $\geq 0.5$ mm. A ratio D/T, i.e., a ratio of the particle size D of the solid particles to the thickness T of the mid layer is $\geq 0.1$ .				

L4 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Golf ball having solid particle-dispersed intermediate rubber layer  
 AN 2003:610043 CAPLUS  
 DN 139:150941  
 TI Golf ball having solid particle-dispersed intermediate rubber layer  
 IN Ohama, Keiji; Endo, Seiichiro  
 PA Japan

SO U.S. Pat. Appl. Publ., 10 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003148826	A1	20030807	US 2003-353027	20030129
				JP 2002-29919 A	20020206
	JP 2003225329	A2	20030812	JP 2002-29919	20020206

AB Title golf ball consists of a core, a mid layer, and a cover, wherein said mid layer comprises a matrix of which base material is a rubber or a synthetic resin, and solid particles which are dispersed in said matrix and have a particle size D of  $\geq 0.5$  mm, and when it is assumed that Shore D hardness of said matrix be Hm and Shore D hardness of said solid particles be Hg, a value (Hm - Hg) is  $\geq 5$ . Thus, a rubber composition was obtained by kneading polybutadiene rubber BR11 100, zinc acrylate 22, zinc oxide 10, and dicumyl peroxide 1.0 part, placed in a mold to give a crosslinked piece which was ground into particles as fillers for the mid layer of a golf ball showing good testing results such as resilience, travel distance, and feel at impact.

L4 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

TI Production of zinc acrylate particle composition for use in rubber formulations

AN 2003:492749 CAPLUS

DN 139:54165

TI Production of zinc acrylate particle composition for use in rubber formulations

IN Higuchi, Hiroshi; Kataoka, Nobuyuki; Nanba, Atsushi; Kobayashi, Keiji; Hasegawa, Manabu; Saito, Yoshinori

PA Bridgestone Sports Co., Ltd., Japan

SO U.S. Pat. Appl. Publ., 14 pp., Cont.-in-part of U.S. Ser. No. 173,420.  
CODEN: USXXCO

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003120098	A1	20030626	US 2002-269946	20021015
				JP 2001-198750 A	20010629
				US 2002-173420 A2	20020618
	JP 2003012600	A2	20030115	JP 2001-198750	20010629

PATENT FAMILY INFORMATION:

FAN 2003:36436

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003012600	A2	20030115	JP 2001-198750	20010629
	US 2003120098	A1	20030626	US 2002-269946	20021015
				JP 2001-198750 A	20010629
				US 2002-173420 A2	20020618

AB A zinc acrylate particle composition comprises zinc acrylate satisfying the conditions (a) the proportion of the zinc acrylate particles with the particle size  $\geq 300$   $\mu\text{m}$  is  $\leq 20\%$  based on the mass of all particles as determined by the dry method, (b) the median of particle sizes as determined by the dry method is 10-300  $\mu\text{m}$ , and (c) the ratio of the median of particle sizes as determined by the dry method to the median of particle sizes as determined by the wet method exceeds 2, the composition addnl.

comprising

an anionic surfactant. A golf ball has as a component made from a rubber composition comprising 1,4-polybutadiene rubber containing  $\geq 40\%$  of a cis form, the zinc acrylate particle composition (10-60) as a co-crosslinking agent, an inactive filler (5-80), and a crosslinking agent ( $\leq 5$

phr). Thus, a suspension comprising toluene (2386), an anionic surfactant (Pelex OT-P) (4.5), and zinc oxide (570) was produced, followed by adding a solution of stearic acid (140) in toluene (490 g) at 40° to the suspension over a period of 1 h, and reacting the components for addnl. 2 h. Acrylic acid (999 g) was added at 15° to the reacted suspension gradually over a period of 3 h, and the reaction was carried out for 4 h at 40°. Zinc acrylate particles (1550 g) containing 0.2% of the anionic surfactant and 10% zinc stearate were obtained after drying.

L4 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Preparation of surface-treated metal acrylate particles having improved dispersibility in rubbers  
 AN 1998:723823 CAPLUS  
 DN 129:331955  
 TI Preparation of surface-treated metal acrylate particles having improved dispersibility in rubbers  
 IN Nagel, Walter R.; Costin, C. Richard; Ceska, Gary W.  
 PA Sartomer Co., Inc., USA; Cray Valley S.A.  
 SO PCT Int. Appl., 18 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9849222	A1	19981105	WO 1998-EP2467	19980424
	W: CZ, HU, PL				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6194504	B1	20010227	US 1997-847705 A	19970428
	EP 977800	A1	20000209	US 1997-847705	19970428
	EP 977800	B1	20010829	EP 1998-924214	19980424
	R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
	US 1997-847705 A 19970428				
	WO 1998-EP2467 W 19980424				
AB	Title metal (meth)acrylate MAn (M = Zn, Ca, Mg, K, Na, Li, Fe, Co, Zr, Al, Ba, and Bi; A = (meth)acrylate; and n = 1-4) in particulate form is prepared by contacting a metal (meth)acrylate with a solution of polymer or mineral oil in organic solvent to encapsulate the salt, and then removing the solvent. The metal (meth)acrylates are especially useful as scorch retarders used in the processing of elastomers in a two roll mill or Banbury type internal mixer. Thus, 10 parts zinc diacrylate treated with 5% R 45HT (hydroxy-terminated polybutadiene) was blended with 256 parts EPDM masterbatch containing Nordel 1040 (EPDM rubber) and additives, 1 part Resin D, and 7.5 parts DiCup 40KE on mill roll, showing no plate out, dust-free, and short incorporation time into the rubber composition				
RE.CNT	2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD				
	ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L4 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Production of zinc acrylate  
 AN 1998:534929 CAPLUS  
 DN 129:162682  
 TI Production of zinc acrylate  
 IN Kobayashi, Keiji; Kodama, Yukihisa; Saotome, Minoru; Saito, Yoshinori  
 PA Bridgestone Sports Co., Ltd, Japan; Nippon Shokubai Co., Ltd; Nihon Joyu Kogyo Co., Ltd.  
 SO U.S., 11 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1



	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5789616	A	19980804	US 1997-874127	19970612
				US 1997-874127	19970612

AB A method is provided for the production of zinc acrylate which possesses an essentially fine constitution, permits easy pulverization into a fine powder, and, when kneaded with a rubber composition, attains uniform diffusion in a state very rarely inducing fast adhesion or formation of clusters. The fine zinc acrylate powder is obtained by reacting acid and a C12-30 fatty acid (such as palmitic or stearic acid) with ZnO in an organic solvent while continuing dispersion of the ZnO in the organic solvent in the presence of an anionic surfactant such as AOT. In examples using stearic acid and Pellex OT-P surfactant, Zn acrylate was obtained 59-65% of which had particle size  $\leq 44 \mu\text{m}$ . Omission of the surfactant resulted in 28% product with particle size  $\leq 44 \mu\text{m}$  and poor workability.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Manufacture of zinc acrylate for improved kneadability of rubber compositions  
 AN 1997:526088 CAPLUS  
 DN 127:150124  
 TI Manufacture of zinc acrylate for improved kneadability of rubber compositions  
 IN Kobayashi, Keiji; Kodama, Yukihiisa; Saotome, Minoru; Saito, Yoshinori  
 PA Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan; Nippon Joryu Kogyo K. K.  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09202747	A2	19970805	JP 1996-12200	19960126
				JP 1996-12200	19960126

AB Fine Zn acrylate is manufactured by reaction of acrylic acid and C12-30 fatty acids with ZnO while dispersing ZnO in organic solvents in the presence of anionic surfactants. Thus, stirring 1411 g ZnO in PhMe containing 11.4 g Pelex OT-P (Na dioctylsulfosuccinate), treating 540 g stearic acid in the suspension at 40°, further treating 2362 g acrylic acid in the suspension at 40°, heating up to 50°, removing H<sub>2</sub>O and PhMe, and drying gave 3988 g Zn acrylate (containing Zn stearate) with content of  $\leq 44\text{-}\mu\text{m}$  particles 64%. Butadiene rubber was kneaded with 30 phr the particles, showing no adhesion to the inner wall of Banbury mixer.

L4 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Core compositions with good durability for two-piece golf balls  
 AN 1995:524114 CAPLUS  
 DN 123:172326  
 TI Core compositions with good durability for two-piece golf balls  
 IN Inomata, Yoshihiro; Yamaguchi, Kiyohiro; Irii, Daisuke  
 PA Yokohama Rubber Co Ltd, Japan  
 SO Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07048477	A2	19950221	JP 1993-192130	19930803
				JP 1993-192130	19930803

AB The compns. contain rubber components containing butadiene rubber with cis-1,4

content  $\geq 40\%$  100, unsatd. carboxylic acid metal salts 9-18 (5-10 parts as unsatd. carboxylic acids), urethane acrylates 5-30, organic peroxides 0.5-3 parts, and amide group-containing fine fibers or fine particles. Thus, BR 01 (cis-butadiene rubber) 100, Ubepol HE (amide-containing fine fiber-natural rubber composite) 3, ZnO 12, Zn acrylate 14, reaction product of hexamethylene diisocyanate trimer (isocyanurate) and glycerol di(mono)methacrylate 10, Aerosil 200 20, N,N'-4,4'-diphenylmethanebismaleimide 10, and dicumyl peroxide 1 part were mixed, press-molded, and covered with Surlyn 1707 to give a golf ball showing good durability and impact resilience.

L4 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

TI Zinc acrylate

AN 1985:524798 CAPLUS

DN 103:124798

TI Zinc acrylate

PA Sumitomo Rubber Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60092238	A2	19850523	JP 1983-201827	19831026
	JP 04010463	B4	19920225		
				JP 1983-201827	19831026

AB Zinc acrylate (I) [**14643-87-9**], useful as a vulcanizing agent for butadiene rubber (no data), is prepared in granular form by treating acrylic acid (II) [79-10-7] with Zn compds., mixing with higher fatty acid Zn salts, and drying. Thus, 1060 g II was stirred with 600 g ZnO in PhMe, treated with a solution of 130 g Zn stearate (III) [557-05-1] in PhMe, and dried in vacuo at 50° to give 1620 g fine **particles** of III-coated I. I prepared similarly without the III showed sputtering, agglomeration, and deposition on the mixer surfaces during drying.

=> logoff logoff hold

'LOGOFF' IS NOT VALID HERE

For an explanation, enter "HELP LOGOFF".

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	37.53	44.78

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-5.54	-5.54

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 08:20:34 ON 04 JUN 2004

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

\* \* \* \* \* RECONNECTED TO STN INTERNATIONAL \* \* \* \* \*  
 SESSION RESUMED IN FILE 'CAPLUS' AT 08:55:19 ON 04 JUN 2004  
 FILE 'CAPLUS' ENTERED AT 08:55:19 ON 04 JUN 2004  
 COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	37.97	45.22
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-5.54	-5.54

=> d his

(FILE 'HOME' ENTERED AT 08:10:12 ON 04 JUN 2004)

FILE 'REGISTRY' ENTERED AT 08:10:21 ON 04 JUN 2004  
 E ZINC ACRYLATE/CN

L1 1 E3

FILE 'CAPLUS' ENTERED AT 08:11:19 ON 04 JUN 2004

L2 486 L1  
 L3 1028108 PARTICLE  
 L4 8 L2(L)L3

=> cryst?

L5 1853915 CRYST?

=> 15(1)12

L6 2 L5(L)L2

=> d 16 1-2 ti fbib abs

L6 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Polymer dispersion type liquid crystal display panel with good light  
 scattering property and high-contrast and its manufacture  
 AN 1997:456859 CAPLUS  
 DN 127:88143  
 TI Polymer dispersion type liquid crystal display panel with good light  
 scattering property and high-contrast and its manufacture  
 IN Senda, Hideo; Yoshida, Hideshi; Nakamura, Kimiaki; Tsuda, Hideaki  
 PA Fujitsu Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 09127488	A2	19970516	JP 1995-284723	19951101
				JP 1995-284723	19951101
AB	In the title display panel having a pair of transparent electrode-bearing substrates, the substrate has on its surface a multi-functional (meth)acrylate-based layer, a polymer-dispersion type liquid crystal precursor is placed between 2 substrates, and the panel is obtained by impressed an active energy such as UV- beam or heat. The display panel is driven by an active matrix and can be used for projection-type optical apparatus				

L6 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Network fiber-reinforced rubber compositions and their manufacture  
 AN 1995:360638 CAPLUS

DN 122:216354  
 TI Network fiber-reinforced rubber compositions and their manufacture  
 IN Shioyama, Tsutomu; Hamano, Naoki  
 PA Bando Chemical Ind, Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06299004	A2	19941025	JP 1993-87323	19930414
	JP 3384499	B2	20030310		
				JP 1993-87323	19930414

AB The compns., useful for belts (no data), are manufactured by kneading 100 parts crosslinkable rubbers and 0.5-130 parts liquid-crystalline polymers above the heat-distortion temperature of the liquid-crystalline polymers and then

kneading below

the heat-distortion temperature The high-temperature kneading may be carried out in

the optional presence of resorcinol-formaldehyde precondensates or resorcinol-alkylphenol-formaldehyde precondensates, followed by low-temperature kneading in the optional presence of methylolated melamines, or the whole kneading may be carried out in the presence of metal salts of carboxy-containing vinyl monomers. Thus, a mixture of Zetpol 2020 100, Novaccurate E 310 (liquid-crystalline polymer) 1, and Nocrac 200 3 parts was kneaded at 180° for 10 min, then kneaded at 60° for 10 min, mixed with 5 parts Peroximon F 40, and kneaded in rolls at apprx.60° to give a rubber composition containing fibrillated

liquid-crystalline

polymer, which was extruded through rolls to give a 1-mm-thick sheet and press-cured at 160° for 30 min. The sheet showed modulus 3.4 MPa, 50% modulus 0.8 MPa, breaking strength 17.4 MPa, and elongation at break 580% in the direction of sheet extrusion, vs. 2.9, 0.6, 10.3, and 430, resp., in the absence of Novaccurate E 310.

=> 15 and 12

L7 9 L5 AND L2

=> 17 not 16

L8 7 L7 NOT L6

=> d 18 1-7 ti

L8 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

TI Synthesis of  $\alpha$ -willemite nanoparticles by post-calcination of flame-made zinc oxide/silica composites

L8 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

TI Homogeneous ZnO Nanoparticles by Flame Spray Pyrolysis

L8 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

TI Adhesion of modified PE/EPDM blends to steel

L8 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

TI Noise gratings recorded with single-beam exposures in liquid holographic photopolymers

L8 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

TI golf ball core compositions

L8 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

TI Preparation of 2-hydroxymethylphenol

L8 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

TI Modified **crystalline** propylene polymer

=> d 18 1-7 ti fbib abs

L8 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

TI Synthesis of  $\alpha$ -willemite nanoparticles by post-calcination of flame-made zinc oxide/silica composites

AN 2002:956444 CAPLUS

DN 139:158834

TI Synthesis of  $\alpha$ -willemite nanoparticles by post-calcination of flame-made zinc oxide/silica composites

AU Tani, Takao; Madler, Lutz; Pratsinis, Sotiris E.

CS Toyota Central R & D Labs., Inc., Nagakute, Aichi, 480-1192, Japan

SO Particle & Particle Systems Characterization (2002), 19(5), 354-358  
CODEN: PPCHEZ; ISSN: 0934-0866

PB Wiley-VCH Verlag GmbH & Co. KGaA

DT Journal

LA English

AB Composite ZnO/SiO<sub>2</sub> nanoparticles were made by flame spray pyrolysis (FSP). Characteristics of the product powder and its **crystallization** behavior on post-calcination were evaluated. Polyhedral aggregates of nano-sized primary particles consisting of ZnO nanocrystals 1-3 nm in size and amorphous SiO<sub>2</sub> were obtained by FSP. A short residence time in the flame can result in the coexistence of the ZnO and SiO<sub>2</sub> clusters without substitution or reaction hindering each other's grain growth. There was almost no change in the XRD pattern by calcination at 600° for 2 h, suggesting a high thermal stability of the ZnO nanocrystals in the composite particles. A pure  $\alpha$ -willemite phase was obtained at 900°. At this calcination temperature, dC and dBET of the powder were 63 and 44 nm, resp. The nano-composite structure of the FSP-made particles can suppress **crystalline** growth of ZnO during calcination to maintain a high reactivity of ZnO with SiO<sub>2</sub>, obtaining pure  $\alpha$ -willemite with high sp. surface area at low calcination temps.

RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

TI Homogeneous ZnO Nanoparticles by Flame Spray Pyrolysis

AN 2002:877073 CAPLUS

DN 138:306136

TI Homogeneous ZnO Nanoparticles by Flame Spray Pyrolysis

AU Tani, Takao; Maedler, Lutz; Pratsinis, Sotiris E.

CS Department Of Mechanical And Process Engineering, Institute Of Process Engineering, ETH Zurich, Zurich, CH-8092, Switz.

SO Journal of Nanoparticle Research (2002), 4(4), 337-343  
CODEN: JNARFA; ISSN: 1388-0764

PB Kluwer Academic Publishers

DT Journal

LA English

AB ZnO nanoparticles were made by flame spray pyrolysis of zinc acrylate-methanol-acetic acid solution. The effect of solution feed rate on particle sp. surface area and **crystalline** size was examined. The average primary particle diameter can be controlled from 10 to 20 nm by the solution feed rate. All powders were **crystalline** zincite. The primary particle diameter observed by transmission electron microscopy was in agreement with the equivalent average primary particle diameter calculated from the sp.

surface

area as well as with the **crystalline** size calculated from the x-ray diffraction patterns for all powders, indicating that the primary

particles were rather uniform in diameter and single **crystals**. Increasing the solution feed rate increases the flame height, and therefore coalescence and/or surface growth was enhanced, resulting in larger primary particles. Compared with ZnO nanoparticles made by other processes, the flame spray pyrolysis-produced powder exhibits some of the smallest and most homogeneous primary particles. Furthermore, the flame spray pyrolysis-produced powder has comparable BET equivalent primary particle diameter with but higher **crystallinity** than sol-gel derived ZnO powders.

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Adhesion of modified PE/EPDM blends to steel  
AN 1998:453007 CAPLUS  
DN 129:136831  
TI Adhesion of modified PE/EPDM blends to steel  
AU Viksne, A.; Rence, L.; Kalnins, M.  
CS Institute of Polymer Materials, Riga Technical University, Riga, LV1048, Latvia  
SO Journal of Macromolecular Science, Pure and Applied Chemistry (1998), A35(7 & 8), 1165-1185  
CODEN: JSPCE6; ISSN: 1060-1325  
PB Marcel Dekker, Inc.  
DT Journal  
LA English  
AB Crosslinking of low- and high-d. polyethylene blends with ethylene-propylenediene terpolymer (EPDM) involving 10, 20, 30% EPDM with dicumyl peroxide (DCP) in the presence of coagent, Zn diacrylate, was investigated. It was found that such blends exhibit increased adhesion against steel and improved strength-deformation properties in comparison with similar blends crosslinked with DCP alone. The peel strength of about 16 kN/m (in the case of modified LDPE/EPDM blend) and 4 kN/m (in the case of modified HDPE/EPDM blend) was observed. The correlation between peel strength and parameters (oxygen uptake, content of oxygen containing groups, change of weight depending on temperature) which characterize thermooxidative conversions in polymer, was studied. The sol and gel fractions of crosslinked blends were characterized by IR spectroscopy, DSC and TG methods. Based on these results, it was assumed that improved peel strength of modified LDPE/EPDM blend is due to optimal ratio between oxidative crosslinking and oxidative degradation for this blend. Another reason may be the increase of interfacial adhesion caused by possible formation of graft copolymer LDPE-EPDM.

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Noise gratings recorded with single-beam exposures in liquid holographic photopolymers  
AN 1996:351837 CAPLUS  
DN 125:22165  
TI Noise gratings recorded with single-beam exposures in liquid holographic photopolymers  
AU Fimia, A.; Belendez, A.; Carretero, L.  
CS Departamento Interuniversitario de Optica, Universidad de Alicante, Alicante, E-03080, Spain  
SO Proceedings of SPIE-The International Society for Optical Engineering (1996), 2688(Holographic Materials II), 135-140  
CODEN: PSISDG; ISSN: 0277-786X  
PB SPIE-The International Society for Optical Engineering  
DT Journal  
LA English  
AB Photopolymers can be considered viable holog. material because of their

many attractive features. Among these we could mention their ability to self-develop, the fact dry processing can be used with them, their good stability and thick emulsion layers, their high sensitivity, diffraction efficiency and resolution, and finally their non-volatile storage. Among the different sources of noise in holog., noise gratings are due to scattering from inhomogeneities in the recording material and have an important spurious effect on volume holog. Their effect at reconstruction is to bring about a reduction in diffraction efficiency and signal-to-noise ratio. Even though these scatter gratings have been seen in PMMA and other photopolymers, and in photorefractive **crystals**, they have really only been analyzed extensively for photog. emulsions, and information about these grating structures in photopolymers is quite scarce. In this communication we present the observation of noise gratings in an acrylamide photopolymer for use in real time holog. The possibilities of this noise source as a optimization technique for this type of materials are pointed out. Noise gratings in these polymer films were created upon exposure to a He-Ne laser collimated beam at 633 nm without any subsequent processing step. The influence of intensity on recording noise gratings and angular selectivity are reported showing its influence on the recording of this type of noise source in real time holog. materials.

L8 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

TI golf ball core compositions

AN 1995:420615 CAPLUS

DN 123:35089

TI golf ball core compositions

IN Sullivan, Michael J.

PA Lisco, Inc., USA

SO U.S., 13 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 5387637	A	19950207	US 1992-932654	19920820
				US 1992-932654	19920820

AB The present invention is directed to improved polybutadiene compns. suitable for molded golf ball core construction. The improved polybutadiene compns. contain specific naturally occurring, essentially non-reinforcing, **crystalline** (preferably microcryst.) silica particles which have the effect of increasing the resilience and/or hardness of the resulting molded cores. In addition, the compns. contain  $\geq 1$  metallic salt of an  $\alpha$ ,  $\beta$ -ethylenically unsatd. monocarboxylic acid and a free radical initiator.

L8 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN

TI Preparation of 2-hydroxymethylphenol

AN 1994:191330 CAPLUS

DN 120:191330

TI Preparation of 2-hydroxymethylphenol

IN Kosaka, Hideo; Tokumaru, Tooru

PA Sumitomo Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 05271134	A2	19931019	JP 1990-407766	19901227
				JP 1990-407766	19901227

AB The title compound (I), useful as material for perfumes, agrochems., etc.,

is prepared by reaction of PhOH with HCHO or its precursors in the presence of catalysts, adjusting PhOH content of the reaction mixts. at 15-55%, and precipitation-separation of I using aromatic hydrocarbons or halogenated hydrocarbons as recrystn. solvents. Heating a mixture of PhOH, cyclohexanol, paraformaldehyde, and Zn(OAc)2.2H2O at 80° for 2 h and vacuum distillation of the reaction mixture at 100° gave a residue containing 42.9% I and 40.4% PhOH, which was dissolved in PhMe, then cooled gradually to 15° to obtain 49.9% **crystalline**I of 97.24% purity.

L8 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Modified **crystalline** propylene polymer  
 AN 1976:6173 CAPLUS  
 DN 84:6173  
 TI Modified **crystalline** propylene polymer  
 IN Ogihara Sadahide; Nakamura, Yoichi; Fukui, Osamu  
 PA Ube Industries, Ltd., Japan  
 SO Ger. Offen., 64 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2510701	A1	19750925	DE 1975-2510701	19750312
	DE 2510701	B2	19771020		
	JP 50129693	A2	19751014	JP 1974-29193	19740315
	JP 51024556	B4	19760724	JP 1974-29193	19740315
	SE 7502139	A	19750916	SE 1975-2139	19750226
	SE 416958	B	19810216		
	SE 416958	C	19810604		
	GB 1463452	A	19770202	JP 1974-29193	19740315
				GB 1975-8052	19750226
				JP 1974-29193	19740315
	US 4032592	A	19770628	US 1975-553439	19750227
				JP 1974-29193	19740315
	CA 1048686	A1	19790213	CA 1975-221236	19750304
				JP 1974-29193	19740315
	FR 2264041	A1	19751010	FR 1975-8122	19750314
				JP 1974-29193	19740315

AB Adhesives with improved chemical, phys., and elec. properties contain **crystalline** propylene polymers, peroxides, 3-(trimethoxysilyl)propyl methacrylate (I) [2530-85-0], and (meth)allyl compds. or (meth)acrylates. Thus, a mixture of 8:92 block ethylene-propylene polymer [9010-79-1] 100, BzOOCMe3 [614-45-9] 0.5, I 0.5, and allyl glycidyl ether (II) [106-92-3] 0.5 parts, prepared at 220°, is pressed at 240° to a 100 µ film which is used to bond 2 0.1 mm Al sheets at 220° and 10 kg/cm2, giving a joint with T-test peel strength 7.5 kg/cm; compared with 0.5 in the absence of I, and 4.0 in the absence of II.

=> 11/prep

486 L1  
 3155446 PREP/RL  
 L9 29 L1/PREP  
 (L1 (L) PREP/RL)

=> d 19 25-29 ti fbib abs

L9 ANSWER 25 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Preparation and some properties of zinc, copper(II), cobalt(II), and nickel(II) acrylates



AN 1984:23023 CAPLUS  
 DN 100:23023  
 TI Preparation and some properties of zinc, copper(II), cobalt(II), and nickel(II) acrylates  
 AU Wojtczak, Zbigniew; Gronowski, Adam  
 CS Uniw. Mikolaja Kopernika, Torun, Pol.  
 SO Polimery (Warsaw, Poland) (1982), 27(12), 471-4  
 CODEN: POLIA4; ISSN: 0032-2725  
 DT Journal  
 LA Polish  
 AB The title acrylates were prepared by reaction of acrylic acid [79-10-7] with ZnO, Cu(OH)<sub>2</sub>, 2CoCO<sub>3</sub>·3Co(OH)<sub>2</sub>·H<sub>2</sub>O, and NiCO<sub>3</sub>·2Ni(OH)<sub>2</sub>·4H<sub>2</sub>O in MeOH or hydrocarbon suspensions. The latter method was more advantageous. The optimum preparative conditions were established. The acrylates of Zn and Cu were prepared as anhydrous salts, whereas those of Co and Ni contained constitutive water. Some properties (solubility, elec. conductivity of solns., etc.) of the acrylates were determined. Radical and thermal polymerization indicated highest reactivity of zinc acrylate [14643-87-9], as compared to that of the remaining acrylates.

L9 ANSWER 26 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Zinc acrylate  
 AN 1981:424278 CAPLUS  
 DN 95:24278  
 TI Zinc acrylate  
 IN Munteanu, Dan; Boncea, Gheorghe; Savu, Corneliu; Savu, Neonela; Sandru, Dan; Cruceanu, Augustin; Rosiu, Lucian  
 PA Combinatul Petrochimic, Pitesti, Rom.  
 SO Rom., 3 pp.  
 CODEN: RUXXA3

DT Patent  
 LA Romanian  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	RO 68158	B	19791030	RO 1975-83584	19751011
				RO 1975-83584	19751011
AB	Acrylic acid containing 0.01-0.5% hydroquinone was treated with ZnO at 50-120° to give Zn acrylate.				

L9 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Surface chemical modification of hard tissues: I. Bone  
 AN 1978:27759 CAPLUS  
 DN 88:27759  
 TI Surface chemical modification of hard tissues: I. Bone  
 AU Brauer, G. M.; Termini, D. J.; Levy, S. M.  
 CS Dent. Res. Sect., Natl. Bur. Stand., Washington, DC, USA  
 SO Journal of Dental Research (1977), 56(6), 646-59  
 CODEN: JDREAF; ISSN: 0022-0345  
 DT Journal  
 LA English  
 AB Bone surfaces were modified in a controlled manner by grafting or by adding interpenetrating polymeric side chains to the bone substrate. The properties of the hard tissue surface attained varied widely. The surface alteration may improve the ability of hard tissues such as bone or dentin to adhere to restorative materials.

L9 ANSWER 28 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Zinc acrylate and methacrylate  
 AN 1977:405403 CAPLUS  
 DN 87:5403  
 TI Zinc acrylate and methacrylate

IN Kobayashi, Daizo; Uchino, Hiroyoshi; Shimizu, Noboru  
PA Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 51138616	A2	19761130	JP 1975-61890	19750526
	JP 58014416	B4	19830318		

AB (H<sub>2</sub>C:CHCO<sub>2</sub>)<sub>2</sub>Zn and (H<sub>2</sub>C:CMeco<sub>2</sub>)<sub>2</sub>Zn were prepared by reaction of H<sub>2</sub>C:CHCO<sub>2</sub>H and H<sub>2</sub>C:CMeco<sub>2</sub>H, resp., with ZnO or Zn(OH)<sub>2</sub> at 40-100° in H<sub>2</sub>O-insol. hydrocarbon solvents (capable of forming an azeotropic mixture with H<sub>2</sub>O), azeotropic removal of H<sub>2</sub>O, and drying. Thus, 75.66 g H<sub>2</sub>C:CHCO<sub>2</sub>H was added to 407 g ZnO in PhMe, the mixture treated 3.5 h at 50-5°, the resulting slurry kneaded 2 h at 50° and 120-80° mm Hg with removal of H<sub>2</sub>O, and dried to give 1004 g (H<sub>2</sub>C:CHCO<sub>2</sub>)<sub>2</sub>Zn (H<sub>2</sub>O content 0.1 weight %, purity 99.5%). No adhesion to the kneader was observed

L9 ANSWER 29 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Unsaturated polyester compositions for bonding molding sand  
AN 1976:447596 CAPLUS  
DN 85:47596  
TI Unsaturated polyester compositions for bonding molding sand  
IN Mori, Atsuo; Nakae, Kiyohiko  
PA Sumitomo Chemical Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 51029318	A2	19760312	JP 1974-103181	19740906
	JP 52020410	B4	19770603		

AB A composition containing an unsatd. polyester 100, a metal salt of an acrylic acid or methacrylic acid 10-200, a polymerization catalyst 0.1-20, and a silane 0.05-10 parts was useful as a binder for molding sand. Thus, a mixture of a composition containing 3 moles maleic anhydride and 1 mole isophthalic acid and propylene glycol at equal weight ratio was polymerized to give a polymer (I) [26301-26-8]. Molding sand (500 g), 52.6 g of a composition of 50% of a mixture [containing I 100, zinc acrylate [14643-87-9] 46, dicumyl peroxide 5, and A 174 (3-methacryloyloxypropyltrimethoxysilane) [2530-85-0] 2 parts] in acetone, and 0.2% Ca stearate were mixed .apprx.15 min. The resulting composition was molded 1 min at 250° to give a product with flexural strength (JIS K-6910-1964) 57 kg/cm<sup>2</sup> and 36 kg/cm<sup>2</sup> (at 250°), compared with 55 (35 kg/cm<sup>2</sup>) for a com. product.

=> d 19 20-24 ti fbib abs

L9 ANSWER 20 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Synthesis of zinc-containing epoxy resin  
AN 1994:55681 CAPLUS  
DN 120:55681  
TI Synthesis of zinc-containing epoxy resin  
AU Anand, Manjit; Srivastava, A. K.

CS Dep. chem., Harcourt Butler Technol., Kanpur, 208002, India  
 SO Journal of Applied Polymer Science (1994), 51(2), 203-11  
 CODEN: JAPNAB; ISSN: 0021-8995  
 DT Journal  
 LA English  
 AB Novel energy resins containing Zn acrylate (I) were synthesized by reacting I with bisphenol-A and an excess of epichlorohydrin. Parameters such as epoxy equivalent weight, OH content, and hydrolyzable Cl content were estimated. These resins, characterized by IR, <sup>1</sup>H-NMR, and <sup>13</sup>C-NMR spectra, were evaluated by thermal anal. Curing was carried out with polyamide at 130° for 24 h. Cured resins have improved thermal and chemical resistance. The reaction follows first-order kinetics. with activation energy 86 and 34 kJ mol<sup>-1</sup> in the presence and absence of I. The role of Zn, which increases epoxidn. due to formation of complex with bisphenol-A, was discussed.

L9 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Preparation, structural characterization and electrical properties of zinc acrylate/styrene copolymers  
 AN 1991:515176 CAPLUS  
 DN 115:115176  
 TI Preparation, structural characterization and electrical properties of zinc acrylate/styrene copolymers  
 AU Allan, J. R.; Bonner, J. G.; Turvey, K.; Gerrard, D. L.; Birnie, J.  
 CS Dep. Appl. Chem. Phys. Sci., Napier Polytech., Edinburgh, EH10 5DT, UK  
 SO ~~Plastics, Rubber and Composites Processing and Applications~~ (1991), 15(2), 115-18  
 CODEN: PRPAEP; ISSN: 0959-8111  
 DT Journal  
 LA English  
 AB The title novel copolymers were prepared via radical polymerization in solution or bulk, and characterized by differential thermal anal., thermogravimetry and, where a suitable solvent could be found, by gel-permeation chromatog. The copolymers had lower mol. weight avs., higher decomposition temps., and higher glass transition temps. than the polystyrene (I) prepared via the same polymerization conditions. I, Zn acrylate homopolymer, and the copolymers exhibited ohmic conduction. The room-temperature elec. conductivity passed through a maximum at a critical proportion of Zn acrylate in the copolymer. The temperature dependence of elec. conductivity was also investigated.

L9 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Manufacture of aggregation-free zinc acrylate for golf balls  
 AN 1991:44678 CAPLUS  
 DN 114:44678  
 TI Manufacture of aggregation-free zinc acrylate for golf balls  
 IN Sasaki, Takashi  
 PA Sumitomo Rubber Industries, Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02218639	A2	19900831	JP 1989-38744	19890217
	JP 2910856	B2	19990623		
				JP 1989-38744	19890217

AB Aggregation-free Zn acrylate (I), which shows better dispersibility and gives higher quality golf balls than conventional ones, is manufactured in high

yield by treatment of acrylic acid (II) with Zn compds. in organic solvents, mixing with higher fatty acids under heating, drying, and further mixing with higher fatty acids or their Zn salts. Thus, 600 g ZnO and 1060 g II were kneaded in MePh at 40-50° for 1 h, mixed with 60 g stearic acid at 75° for 30 min, heated in vacuo for 2 h with removal of H<sub>2</sub>O and MePh, and mixed with 60 g Zn stearate for 30 min to manufacture 1610 g surface-treated I. JSR-BR 11 100, the surface-treated I 31, ZnO 22, dicumyl peroxide 2.0, and antioxidant 0.5 part were mixed, vulcanized at 150° for 30 min, and formed into golf balls, which showed PGA compression 103, restitution coefficient 0.791, and durability index 117, vs. 101, 0.781, and 100, resp., without Zn stearate.

L9 ANSWER 23 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

TI Zinc acrylate

AN 1985:524798 CAPLUS

DN 103:124798

TI Zinc acrylate

PA Sumitomo Rubber Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60092238	A2	19850523	JP 1983-201827	19831026
	JP 04010463	B4	19920225		
				JP 1983-201827	19831026

AB Zinc acrylate (I) [14643-87-9], useful as a vulcanizing agent for butadiene rubber (no data), is prepared in granular form by treating acrylic acid (II) [79-10-7] with Zn compds., mixing with higher fatty acid Zn salts, and drying. Thus, 1060 g II was stirred with 600 g ZnO in PhMe, treated with a solution of 130 g Zn stearate (III) [557-05-1] in PhMe, and dried in vacuo at 50° to give 1620 g fine particles of III-coated I. I prepared similarly without the III showed sputtering, agglomeration, and deposition on the mixer surfaces during drying.

L9 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

TI Separation of salt-like vinylic compounds in the solid state from aqueous solutions

AN 1985:167322 CAPLUS

DN 102:167322

TI Separation of salt-like vinylic compounds in the solid state from aqueous solutions

IN Arndt, Peter Joseph; Wenzel, Franz; Mueller, Manfred; Schlosser, Fritz

PA Rohm G.m.b.H., Fed. Rep. Ger.

SO Eur. Pat. Appl., 20 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 132703	A1	19850213	EP 1984-108165	19840712
	EP 132703	B1	19861230		
				DE 1983-3326117	19830720
				DE 1984-3418664	19840519
	DE 3326117	A1	19850131	DE 1983-3326117	19830720
	DE 3418664	A1	19851121	DE 1984-3418664	19840519

PATENT FAMILY INFORMATION:

FAN 1985:166320

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
--	------------	------	------	-----------------	------

PI	DE 3326117	A1	19850131	DE 1983-3326117	19830720
	US 4614827	A	19860930	US 1984-629358	19840710
				DE 1983-3326117	19830720
				DE 1984-3418664	19840519
	EP 132703	A1	19850213	EP 1984-108165	19840712
	EP 132703	B1	19861230		
	R: DE, FR, GB				
				DE 1983-3326117	19830720
				DE 1984-3418664	19840519
	JP 60048946	A2	19850316	JP 1984-148726	19840719
				DE 1983-3326117	19830720
				DE 1984-3418664	19840519

AB In the isolation of solid salts of unsatd. acid derivs., e.g. quaternary ammonium salts of (meth)acrylate ester or amide derivs., from aqueous solution, polymerization is suppressed by using spray drying. Thus, an 80% aqueous solution of [2-(methacryloyloxy)ethyl]trimethylammonium chloride [5039-78-1] (prepared by pressure quaternization with MeCl) was spray-dried in a tower with a sieve plate rotating at 15,000 rpm and an air inlet temperature of 125°, giving 15 kg/h (.apprx.95% yield) solid monomer containing <1% H2O and no polymer.

=> d 19 15-19 ti fbib abs

L9 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Production of zinc acrylate  
 AN 1998:534929 CAPLUS  
 DN 129:162682  
 TI Production of zinc acrylate  
 IN Kobayashi, Keiji; Kodama, Yukihiisa; Saotome, Minoru; Saito, Yoshinori  
 PA Bridgestone Sports Co., Ltd, Japan; Nippon Shokubai Co., Ltd; Nihon Joyu Kogyo Co., Ltd.  
 SO U.S., 11 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 5789616	A	19980804	US 1997-874127	19970612
				US 1997-874127	19970612

AB A method is provided for the production of zinc acrylate which possesses an essentially fine constitution, permits easy pulverization into a fine powder, and, when kneaded with a rubber composition, attains uniform diffusion in a state very rarely inducing fast adhesion or formation of clusters. The fine zinc acrylate powder is obtained by reacting acid and a C12-30 fatty acid (such as palmitic or stearic acid) with ZnO in an organic solvent while continuing dispersion of the ZnO in the organic solvent in the presence of an anionic surfactant such as AOT. In examples using stearic acid and Pellex OT-P surfactant, Zn acrylate was obtained 59-65% of which had particle size ≤44 μm. Omission of the surfactant resulted in 28% product with particle size ≤44 μm and poor workability.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Antifouling marine coating compositions having self polishing properties  
 AN 1998:389237 CAPLUS  
 DN 129:68899  
 TI Antifouling marine coating compositions having self polishing properties  
 IN Sugihara, Mitsunori; Ito, Masamitsu

PA Mitsubishi Rayon Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10158547	A2	19980616	JP 1996-336261	19961203
	JP 3342815	B2	20021111		
				JP 1996-336261	19961203

OS MARPAT 129:68899

AB Title compns. comprise copolymers as vehicles manufactured by polymerization of (a)

monomers having two double bonds and metals, (b) CH<sub>2</sub>:CR<sub>1</sub>CO<sub>2</sub>MR<sub>2</sub> (R<sub>1</sub> = H, Me; M = Mg, Zn, Cu; R<sub>2</sub> = organic acid residue), and (c) unsatd. comonomers. Thus, a copolymer prepared from Mg acrylate 10, Mg acrylate versatic acid salt 15, iso-Bu methacrylate 55, and 2-ethylhexyl acrylate 20 parts was blended with Cu<sub>2</sub>O, ZnO, SiO<sub>2</sub>, Disparlon 4200 (antisagging agent), and xylene to give an antifouling coating with good self polishing property and no cracking and peeling after treated in seawater.

L9 ANSWER 17 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

TI Manufacture of zinc acrylate for improved kneadability of rubber compositions

AN 1997:526088 CAPLUS

DN 127:150124

TI Manufacture of zinc acrylate for improved kneadability of rubber compositions

IN Kobayashi, Keiji; Kodama, Yukihisa; Saotome, Minoru; Saito, Yoshinori

PA Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan; Nippon Joryu Kogyo K. K.

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09202747	A2	19970805	JP 1996-12200	19960126
				JP 1996-12200	19960126

AB Fine Zn acrylate is manufactured by reaction of acrylic acid and C<sub>12</sub>-30 fatty acids with ZnO while dispersing ZnO in organic solvents in the presence of anionic surfactants. Thus, stirring 1411 g ZnO in PhMe containing 11.4 g Pelex OT-P (Na dioctylsulfosuccinate), treating 540 g stearic acid in the suspension at 40°, further treating 2362 g acrylic acid in the suspension at 40°, heating up to 50°, removing H<sub>2</sub>O and PhMe, and drying gave 3988 g Zn acrylate (containing Zn stearate) with content of ≤44-μm particles 64%. Butadiene rubber was kneaded with 30 phr the particles, showing no adhesion to the inner wall of Banbury mixer.

L9 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

TI Ultraviolet ray-curable adhesive compositions for metal hubs

AN 1997:144279 CAPLUS

DN 126:145195

TI Ultraviolet ray-curable adhesive compositions for metal hubs

IN Ooshima, Kensho

PA Tosoh Corp, Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
--	------------	------	------	-----------------	------

PI	JP 08325527	A2	19961210	JP 1995-136979	19950602
				JP 1995-136979	19950602

AB The compns., useful for bonding metal hubs to optical recording disks having resin substrates, contain metal (meth)acrylates, mono- and/or polyfunctional (meth)acrylates and photocuring initiators. Thus, Mg diacrylate 10, tetrahydrofurfuryl acrylate 30, trimethylolpropane triacrylate 30, spiroglycol urethane diacrylate 30, 4-dimethylaminoacetophenone 5, and benzophenone 5 g were mixed, coated on a disk, and cured in UV light with a metal hub to give a test piece showing adhesive strength 43 kg/cm<sup>2</sup> initially and 31 kg/cm<sup>2</sup> after 2000 h at 80°.

L9 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

TI Reactive filler-containing plastisol compositions as sealing agents or undercoatings for crack-, blister-, and scaling-free topcoats

AN 1995:613057 CAPLUS

DN 123:289860

TI Reactive filler-containing plastisol compositions as sealing agents or undercoatings for crack-, blister-, and scaling-free topcoats

IN Oota, Tatsuro; Ogawa, Tsugio

PA Kyoeisha Kagaku Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 07082445	A2	19950328	JP 1993-255147	19930917
				JP 1993-255147	19930917

AB Title compns. useful for cationic electrodeposition steel plates of automobile bodies, contain (A) poly(vinyl chloride), vinyl chloride copolymers, or their mixts., (B) plasticizers, and (C) unsatd. bond-containing organometallic compds. as reactive fillers. Thus, a plastisol composition containing vinyl chloride polymers (Geon 121, Kanevinyl PSL 10) 100, DOP 150, CaCO<sub>3</sub> 200, unsatd. bond-containing organometallic compound [prepared from 81.4

g ZnO and 456 g Light Ester HO-ML (COOH-containing methacrylate)] 50, CaO 20, and PbSO<sub>4</sub> 20 parts showed good storage stability, good adhesion strength, and good crack resistance due to heating or moisture in the topcoat.

=> d 19 10-14 ti fbib abs

L9 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN

TI Storage stable antifouling coating compositions

AN 2000:694472 CAPLUS

DN 133:283086

TI Storage stable antifouling coating compositions

IN Sugihara, Mitsunori; Ikegami, Yukihiro; Hotta, Kazuhiko; Nagasaka, Toshio; Iwase, Kunio

PA Mitsubishi Rayon Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 2000273366	A2	20001003	JP 1999-78439	19990323
				JP 1999-78439	19990323

AB Title compns. comprise (A) copolymers of monomer mixts. containing

metal-containing polymerizable monomers and (B) compds. R1MR2, where M = Mg, Zn, or Cu and R1-2 = organic acid residue. Thus, a composition comprising a vehicle solution containing zinc methacrylate-Me methacrylate-Et acrylate copolymer 40, zinc versatate 8.8, cuprous oxide 20, zinc white 15, silica 3, Disparlon 4200 1, and xylene 8 parts was applied on a sandblasting steel immediately and after 6 mo storage, giving good marine antifouling property and crack and peeling resistance in both cases.

L9 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI Storage stable antifouling coating compositions giving coating films with long-lasting antifouling properties, low hardness change, crack resistance, and good adhesion  
 AN 2000:694471 CAPLUS  
 DN 133:283085  
 TI Storage stable antifouling coating compositions giving coating films with long-lasting antifouling properties, low hardness change, crack resistance, and good adhesion  
 IN Sugihara, Mitsunori; Ikegami, Yukihiro; Hotta, Kazuhiko; Nagasaka, Toshio; Iwase, Kunio  
 PA Mitsubishi Rayon Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 10 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000273365	A2	20001003	JP 1999-78438	19990323
	JP 3273033	B2	20020408		
				JP 1999-78438	19990323

AB Title compns. comprise copolymers of monomer mixts. containing metal-containing monomers CH2:CR1COOMR2 and CH2:CR3COOMR4 as vehicles, where R1, R3 = H or Me; M = Mg, Zn, or Cu; R2 = unsatd. group-containing organic acid residue; and R4 = organic acid residue not containing unsatd. group. Thus, a composition comprising a storage stable varnish containing zinc acrylate versatate-zinc methacrylate versatate-zinc methacrylate oleate-Me methacrylate-Et acrylate copolymer 40, cuprous oxide 20, zinc white 15, silica 3, Disparlon 4200 1, and xylene 8 parts was applied on a sandblasting steel giving good marine antifouling property for ≥30 mo.

L9 ANSWER 12 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
 TI In situ preparation of zinc salts of unsaturated carboxylic acids to reinforce NBR  
 AN 2000:521959 CAPLUS  
 DN 133:224028  
 TI In situ preparation of zinc salts of unsaturated carboxylic acids to reinforce NBR  
 AU Yuan, Xinheng; Peng, Zonglin; Zhang, Yong; Zhang, Yinxi  
 CS Polymeric Materials Research Institute, Shanghai Jiaotong University, Shanghai, 200240, Peop. Rep. China  
 SO Journal of Applied Polymer Science (2000), 77(12), 2740-2748  
 CODEN: JAPNAB; ISSN: 0021-8995  
 PB John Wiley & Sons, Inc.  
 DT Journal  
 LA English  
 AB Through the neutralization reaction of zinc oxide (ZnO) and methacrylic acid (MAA) or acrylic acid (AA), zinc methacrylate (ZMA) or zinc acrylate (ZA) was in situ prepared in nitrile rubber (NBR). The mech. properties and crosslinking structure of the resulting peroxide-cured NBR vulcanizates were studied. The results showed that ZnO/MAA (AA) had a great reinforcing effect for NBR, and their amts. and ratio played important



roles in influencing the mech. properties. Such vulcanizate contains both covalent crosslinks and salt crosslinks, and the change in the tensile strength of the vulcanizate was related to the variation of the salt crosslink d.

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Rubber golf balls and mixed acid zinc salt as co-crosslinking agents for use in their manufacture  
AN 1999:48882 CAPLUS  
DN 130:111453  
TI Rubber golf balls and mixed acid zinc salt as co-crosslinking agents for use in their manufacture  
IN Ekashira, Yoshinori; Shindo, Jun  
PA Bridgestone Sports Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11009720	A2	19990119	JP 1997-184496	19970625
				JP 1997-184496	19970625

AB Title golf balls comprise vulcanized moldings of compns. containing co-crosslinking agents obtained by dispersing ZnO in organic solvents in the presence of anionic surfactants and treating acrylic acid (I) and C12-30 higher fatty acids with ZnO. Thus, I and stearic acid were treated with ZnO in toluene in the presence of Na dioctylsulfosuccinate to give a Zn salt mixture, which was mixed with a polybutadiene rubber composition and hot pressed to give a test piece showing good hardness and repulsion property.

L9 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2004 ACS on STN  
TI Antifouling paint compositions  
AN 1998:790633 CAPLUS  
DN 130:26292  
TI Antifouling paint compositions  
IN Sugihara, Mitsunori; Hotta, Kazuhiko; Ito, Masamitsu  
PA Mitsubishi Rayon Co., Ltd., Japan  
SO PCT Int. Appl., 24 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9853015	A1	19981126	WO 1998-JP2155	19980515
	W: KR, SG, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
				JP 1997-129850 A	19970520
EP	1006156	A1	20000607	EP 1998-919619	19980515
	R: DE, DK, ES, FR, GB, NL, SE, FI				
				JP 1997-129850 A	19970520
				WO 1998-JP2155 W	19980515
JP	11035877	A2	19990209	JP 1998-135132	19980518
JP	3313066	B2	20020812		
				JP 1997-129850 A	19970520
US	6177530	B1	20010123	US 1999-432182	19991102
				JP 1997-129850 A	19970520
				WO 1998-JP2155 A1	19980515

AB The title composition contain, as a vehicle, a copolymer of a monomer mixture of

a metal-containing polymerizable monomer (a1) having two unsatd. groups and  
another metal-containing polymerizable monomer (a2) CH<sub>2</sub>:CR<sub>1</sub>CO<sub>2</sub>MR<sub>2</sub> (R<sub>1</sub> = H, Me;  
M = Mg, Zn, Cu; R<sub>2</sub> = an organic acid residue). A copolymer was prepared from  
Zn acrylate 12, Zn Versatate acrylate 18, Me methacrylate 20, and Et  
acrylate 50 parts.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	143.51	150.76
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-25.64	-25.64

SESSION WILL BE HELD FOR 60 MINUTES  
STN INTERNATIONAL SESSION SUSPENDED AT 09:22:09 ON 04 JUN 2004

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	JAN 27	Source of Registration (SR) information in REGISTRY updated and searchable
NEWS 4	JAN 27	A new search aid, the Company Name Thesaurus, available in CA/CAPLUS
NEWS 5	FEB 05	German (DE) application and patent publication number format changes
NEWS 6	MAR 03	MEDLINE and L MEDLINE reloaded
NEWS 7	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS 8	MAR 03	FRANCEPAT now available on STN
NEWS 9	MAR 29	Pharmaceutical Substances (PS) now available on STN
NEWS 10	MAR 29	WPIFV now available on STN
NEWS 11	MAR 29	New monthly current-awareness alert (SDI) frequency in RAPRA
NEWS 12	APR 26	PROMT: New display field available
NEWS 13	APR 26	IFIPAT/IFIUDB/IFICDB: New super search and display field available
NEWS 14	APR 26	LITALERT now available on STN
NEWS 15	APR 27	NLDB: New search and display fields available
NEWS 16	May 10	PROUSDDR now available on STN
NEWS 17	May 19	PROUSDDR: One FREE connect hour, per account, in both May and June 2004
NEWS 18	May 12	EXTEND option available in structure searching
NEWS 19	May 12	Polymer links for the POLYLINK command completed in REGISTRY
NEWS 20	May 17	FRFULL now available on STN
NEWS 21	May 27	STN User Update to be held June 7 and June 8 at the SLA 2004 Conference

NEWS 22 May 27 New UPM (Update Code Maximum) field for more efficient patent SDIs in CPlus

NEWS 23 May 27 CPlus super roles and document types searchable in REGISTRY

NEWS 24 May 27 Explore APOLLIT with free connect time in June 2004

NEWS EXPRESS MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004

NEWS HOURS STN Operating Hours Plus Help Desk Availability

NEWS INTER General Internet Information

NEWS LOGIN Welcome Banner and News Items

NEWS PHONE Direct Dial and Telecommunication Network Access to STN

NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 11:41:05 ON 04 JUN 2004

=> file reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 11:41:35 ON 04 JUN 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 3 JUN 2004 HIGHEST RN 689216-09-9

DICTIONARY FILE UPDATES: 3 JUN 2004 HIGHEST RN 689216-09-9

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> e zinc diacrylate/cn

E1	1	ZINC DIACETYLDITHIOCARBAMATE/CN
E2	1	ZINC DIACID PHOSPHATE/CN
E3	1 -->	ZINC DIACRYLATE/CN
E4	1	ZINC DIACRYLATE HOMOPOLYMER/CN
E5	1	ZINC DIAMMINE DINITRATE/CN
E6	1	ZINC DIAMMONIUM DISULFATE HEXAHYDRATE/CN
E7	1	ZINC DIAMYL DITHIOPHOSPHATE/CN

E8 1 ZINC DIAMYL DITHIOCARBAMATE/CN  
 E9 1 ZINC DIAMYLPHENYL PHOSPHATE/CN  
 E10 1 ZINC DIARSENIDE/CN  
 E11 1 ZINC DIATOMIC MOLECULE/CN  
 E12 1 ZINC DIBENZOATE/CN

=> e3

L1 1 "ZINC DIACRYLATE"/CN

=> d l1

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN

RN 14643-87-9 REGISTRY

CN 2-Propenoic acid, zinc salt (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Acrylic acid, zinc salt (8CI)

CN Zinc acrylate (7CI)

OTHER NAMES:

CN Actor ZA

CN Blemmer S 122

CN RR-ZDA

CN Saret 633

CN Sartomer 633

CN SR 111

CN SR 526

CN SR 633

CN SR 633 (acrylate)

CN SR 705

CN SR 706

CN **Zinc diacrylate**

CN Zinc(II) acrylate

CN ZNDA 90S

DR 120220-24-8, 113329-02-5, 70507-67-4, 142605-01-4, 191744-27-1

MF C3 H4 O2 . 1/2 Zn

CI COM

LC STN Files: BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,  
 CHEMLIST, CIN, CSCHM, GMELIN\*, IFICDB, IFIPAT, IFIUDB, PIRA, PROMT,  
 TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

DT.CA Caplus document type: Conference; Journal; Patent

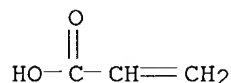
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); PROC  
 (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses);  
 NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: BIOL (Biological  
 study); PREP (Preparation); PRP (Properties); USES (Uses)

RL.NP Roles from non-patents: PREP (Preparation); PROC (Process); PRP  
 (Properties); RACT (Reactant or reagent); USES (Uses)

RLD.NP Roles for non-specific derivatives from non-patents: PREP  
 (Preparation); PRP (Properties); USES (Uses)

CRN (79-10-7)



486 REFERENCES IN FILE CA (1907 TO DATE)  
27 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
486 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e zinc acrylate/cn

E1	1	ZINC ACEXAMATE/CN
E2	1	ZINC ACID PHOSPHATE/CN
E3	1 -->	ZINC ACRYLATE/CN
E4	1	ZINC ACRYLATE HOMOPOLYMER/CN
E5	1	ZINC ACRYLATE POLYMER/CN
E6	1	ZINC ACRYLATE-CALCIUM ACRYLATE-LAURYL VINYL ETHER COPOLYMER/ CN
E7	1	ZINC ACRYLATE-CALCIUM ACRYLLATE-LAURYL VINYL ETHER POLYMER/C N
E8	1	ZINC ACRYLATE-LAURYL VINYL ETHER COPOLYMER/CN
E9	1	ZINC ACRYLATE-LAURYL VINYL ETHER POLYMER/CN
E10	1	ZINC ACRYLATE-STYRENE COPOLYMER/CN
E11	1	ZINC ACRYLATE-VINYL CHLORIDE COPOLYMER/CN
E12	1	ZINC ADIPATE/CN

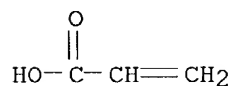
=> e3

L2 1 "ZINC ACRYLATE"/CN

=> d 12

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 14643-87-9 REGISTRY  
CN 2-Propenoic acid, zinc salt (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Acrylic acid, zinc salt (8CI)  
CN **Zinc acrylate (7CI)**  
OTHER NAMES:  
CN Actor ZA  
CN Blemmer S 122  
CN RR-ZDA  
CN Saret 633  
CN Sartomer 633  
CN SR 111  
CN SR 526  
CN SR 633  
CN SR 633 (acrylate)  
CN SR 705  
CN SR 706  
CN Zinc diacrylate  
CN Zinc(II) acrylate  
CN ZNDA 90S  
DR 120220-24-8, 113329-02-5, 70507-67-4, 142605-01-4, 191744-27-1  
MF C3 H4 O2 . 1/2 Zn  
CI COM  
LC STN Files: BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,  
CHEMLIST, CIN, CSCHEM, GMELIN\*, IFICDB, IFIPAT, IFIUDB, PIRA, PROMT,  
TOXCENTER, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*  
(\*\*Enter CHEMLIST File for up-to-date regulatory information)  
DT.CA Caplus document type: Conference; Journal; Patent  
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); PROC  
(Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses);  
NORL (No role in record)  
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological  
study); PREP (Preparation); PRP (Properties); USES (Uses)

RL.NP Roles from non-patents: PREP (Preparation); PROC (Process); PRP  
(Properties); RACT (Reactant or reagent); USES (Uses)  
RLD.NP Roles for non-specific derivatives from non-patents: PREP  
(Preparation); PRP (Properties); USES (Uses)  
CRN (79-10-7)



● 1/2 Zn

486 REFERENCES IN FILE CA (1907 TO DATE)  
27 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
486 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> logoff hold

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

13.24

13.45

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 11:42:42 ON 04 JUN 2004